



PEPCO

**CENTRAL POWER GENERATION CO.LTD.
(GENCO-II)**

0722 - 579088

0722 - 578328

Genco2_guddu@yahoo.com

No. CPGCL/CEO/Tariff/CMP-LHR-01

OFFICE OF THE
CHIEF EXECUTIVE OFFICER
THERMAL POWER STATION, GUDDU.

Date: 06/10/2009

The Registrar,

National Electric Power Regulatory Authority,
2nd Floor, OPF Building, G-5/2,
Islamabad.

Subject: **PETITION FOR DETERMINATION OF TARIFF FOR 50MW RENTAL
POWER PROJECT FOR FIVE(5) YEARS CPGCL(Licensee # GL/02/2002).**

Ref: This office Letter No.1. CPGCL/CEO/Naudero Tariff/CMP-ISD/05-8 dated 02.10.2009
2.CPGCL/CEO/Naudero Tariff/CMP-ISD/09-12 dated 02.10.2009

Please refer to our letters mentioned above and cited subject.

It is to inform that, the Rental Services Contract is going to be signed between M/s Walters Power International (The Seller) and Central Power Generation Company Limited (The Buyer) for installation, commissioning, operation and maintenance of 50MW Rental Power Project at Mean Site Condition based on gas fuel at Naudero (Called Naudero-II), Sindh.

The Tariff Petition for determination of 51MW Rental Power Project, Naudero (called Naudero-I) was submitted vide our letter No.CPGCL/CEO/PA/Tariff/Rental/755 dated 08.08.2009 in pursuant to Rental Services Contract dated June 4, 2009.

Then M/s Walters Power International (WPI), vide its letter WPI/786/09 dated 19.09.2009 offered 'Naudero Expansion' and combined the capacity & contract value of both the projects (Naudero-I & II). In this regard, we filed tariff petition for 96MW Rental Power Project for Naudero-I & II (Combined) vide reference letter No.2.

Now, WPI in their letter No.WPI/NDR/952/09 dated 06.10.2009(copy attached) have submitted revised offer for Naudero-II as a separate project.

Moreover, ECC in its decision case No.ECC-121/15/2009 dated 21.08.2009 (find Annexure-A) decided at Sr.No.iii as under:

"The approved, unsolicited projects shall be required to obtain approval of their proposed tariff from NEPRA within the minimum period prescribed"

The Secretary, MoW&P moved a summary dated 26.08.2009 (find Annexure-B) to the Cabinet wherein approval of the Cabinet at Para-4 is solicited as under:-

"It is therefore requested that in view of the prevailing energy crises in the country, and Government's public announcement to end load shedding, the Ministry of Water & Power may be allowed to go ahead with the balance of ICB Projects totaling upto 2216 MW from amongst the ICB/Unsolicited projects in Annexure V & VI. The ECC vide its decision on 21.08.2009 has already authorized the Ministry to undertake suitable adjustments/substitution and capping from the projects already in pipeline. The unsolicited projects shall however, be to obtain approval of their proposed tariff from NEPRA within the minimum period prescribed, as already decided by ECC as well".

In pursuant to the decision taken in the ECC and Cabinet meetings on Rental Power Projects, it was directed to obtain approval of their proposed tariff from NEPRA.

Urgently
AD (M/R)

Registrar
Dt. No. 9907
Dated. 2-10-09

(2)

In this regard, following information/structure of Reference Tariff of Nuadero-II is submitted along with Technical information.

Structure of Reference Tariff

Reference Tariff has been proposed in two (2) parts i.e. Capacity Purchase Price (CPP) and Energy Purchase Price (EPP). Moreover, Supplemental Charges / Pass-Through Items have also been proposed to be charged to Central Power Purchasing Agency (CPPA) within NTDC. The proposed Reference Tariff comprises of the following two parts and each part has also two components:

- a) Capacity Purchase Price (CPP)
 - o Escalable Component
 - o Non-Escalable Component (Rental Charges)
- b) Energy Purchase Price (EPP)
 - o Fuel Cost Component
- c) Supplemental Charges & Pass – Through Items

Capacity Purchase Price (CPP)

❖ Non-Escalable Component

Non-Escalable Component of Capacity Purchase Price (CPP) would cover the following O&M Cost:

- Rental Payments
- Financial Charges on LC
- Pipeline Cost
- Financial Charges on duties of plant & equipment to be re-exported.
- Administration Cost
- Generation License Renewal Fee & Tariff Petition Fee

❖ Escalable Component

Escalable Component of Capacity Purchase Price (CPP) would cover the following fixed Cost:

- Cost of Working Capital Financing.
- Interest Charges.
- Principal Repayment.

Energy Purchase Price (EPP)

❖ Fuel Cost

Supplemental Charges & Pass-through Items

Any actual payment on account of the following and like nature shall be pass-through to NTDC.

- Actual payments to Worker' Welfare and Profit Participation Funds
- Actual Income / Turnover Tax
- General Sale Tax
- Any other Duties / Taxes etc
- Insurance Costs due to change of policy
- Variation in Fuel Price
- Electricity Duty on In-house consumption of Energy
- Expenditure on Modification or Expansion of the Protective Devices required by the NTDC
- Further capital expenditures or any other costs.

Project Details

Naudero - II (Naudero Expansion)

- | | |
|----------------------------|--|
| 1) Capacity at MSD | 50 MW |
| 2) Plant | LM 6000 Aeroderivative gas turbine of General Electric make and 2x3.1 MW, JGS 620F Jenbacher Make reciprocating gas Engines. |
| 3) Fuel | Natural Gas |
| 4) Heat Rate | 9500 BTU/kWh LHV |
| 5) Guaranteed availability | 92% |
| 6) Gas Consumption | 15 MMCFD |
| 7) Efficiency | 35.9% |
| 8) Term(Duration) | 60 months |
| 9) Total Contract Value | US\$80,592,000/- |

The Chief Executive Officer, Central Power Generation Company Limited, shall act as authorized representative of the Company in connection with further information / clarifications, if any, required by NEPRA during the course of scrutiny of the Application and the petition in hand and / or submission, presentations, revisions or alterations that Company may submit from time to time till for approval of the Bulk Supply Tariff by honorable Authority.

The Annexure-C (along with working papers attachments I to IV) showing the Variable charges (Energy Purchase Price) and fixed charges (Capacity Purchase Price) indicated in terms of Rs./kwh and Rs./kw/Month,. The Fuel/Gas cost component of the variable charge (Energy Purchase Price) shall, however, is according to the price changes by OGRA Capacity Purchase Prices to be adjusted on the basis of indexation of Dollar Rate. The tariff indicated in Annexure-C along with affidavit, is submitted for approval of National Electric Power Regulatory Authority (NEPRA).

It is requested to please consider:

- Our letter no. CPGCL/CEO/Naudero Tariff/CMP-ISD/05-8 dated 02.10.2009 as cancelled.
- Our letter No.CPGCL/CEO/PA/Tariff/Rental/755 dated 08.08.2009 for determination of tariff for 51MW Rental Power Project, Naudero-I.
- Current Tariff Petition for determination of 50MW Rental Power Project, Naudero-II

It is further requested to please waive-off the Tariff Petition Fee for both the projects i.e. Naudero-I & II as it has also been requested vide MD PEPCO letter no. MD/PEPCO/GM(WPPO)/13910-12 dated October 1, 2009.

It is therefore requested to please process our applications for Tariff Petition at earliest.


 Chief Executive Officer *06/10/09*

D/A above:



Pakistan: Ground Floor, Cooperative Insurance Building, 23, The Mall, Lahore 54000
T: (042) 722.2519 | F: (042) 722.6348

Managing Director
PEPCO,
725- WAPDA House
Lahore.

Our Ref: WPI/NDR/952/09
Dated : October 6, 2009

SUB: Revised Proposal For Rental Plant Naudero-II (Naudero Expansion)

Dear Sir,

With reference to the meeting held at WAPDA House on October 4, 2009 on the subject matter, we are pleased to submit the following revised offer for Naudero-II Rental Plant in line with our original offer dated September 5, 2009. The previous offer dated Oct. 5, 2009 is withdrawn in light of telephonic discussion with CE-IV/ Acting GM (WPPO) on Oct. 5, 2009.

- | | |
|------------------------------------|--|
| 1- Installed capacity | A Net to grid 50-MW at mean site conditions, using One LM 6000 Aeroderivative gas turbine of General Electric make and 2X 3.1 MW, JGS 620F Jenbacher Make reciprocating gas Engines. |
| 2- Fuel | Natural gas |
| 3- Heat Rate | 9500 BTU/ kwh LHV |
| 4- Guaranteed Availability | 92% |
| 5- Gas consumption | 15 MMCFD |
| 6- Efficiency | 35.9 % |
| 7- Term (Duration) | 60 months |
| 8- Tariff for Capacity and O&M/kwh | US\$ 0.04 |
| 9- Total Contract value | US\$ 80,592,000/- |

We are pleased to attach herewith a copy of draft 'Rental Service Contract', along with a soft copy, for your review, approval and signature.

Sincerely Yours

For Walters Power International Ltd

(M. N. Beg)

CENTRAL POWER GENERATION COMPANY LIMITED
50MW RENTAL POWER PROJECT, NAUDERO-II
SCHEDULE OF TARIFF

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|--------|--------|--------|--------|--------|
| <u>Capacities (MW)</u> | | | | | |
| Install capacity (MW) | 50 | 50 | 50 | 50 | 50 |
| Net Dependable Capacity (MW) / Guaranteed | 46 | 46 | 46 | 46 | 46 |
| Generation %age of Capacity | 92% | 92% | 92% | 92% | 92% |
| Unavailable Capacity | 8% | 8% | 8% | 8% | 8% |

Efficiency and Heat Rate

| | | | | | |
|------------------------------|--------|--------|--------|--------|--------|
| Fuel Price - Gas (Rs./MMBTU) | 321.75 | 321.75 | 321.75 | 321.75 | 321.75 |
| Heat Rate - Net (BTU/Kwh) | 9500 | 9500 | 9500 | 9500 | 9500 |
| Calorific Value Gas (BTU) | 900 | 900 | 900 | 900 | 900 |

Total Generation

| | | | | | |
|----------------------------|---------|---------|---------|---------|---------|
| Net Generation - Gas (GWh) | 402.960 | 402.960 | 402.960 | 402.960 | 402.960 |
|----------------------------|---------|---------|---------|---------|---------|

Calculation Cost**Variable Cost Component**

| | | | | | |
|-----------------------------|---------|---------|---------|---------|---------|
| Fuel Cost / kWh Gas | 3.0566 | 3.0566 | 3.0566 | 3.0566 | 3.0566 |
| Fuel Cost Gas (Million Rs.) | 1231.70 | 1231.70 | 1231.70 | 1231.70 | 1231.70 |

Fixed Cost Component (Escalable Component)

| | | | | | |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Rent for Rental Block (Million Rs.) | 2087.01 | 1150.53 | 1150.53 | 1150.53 | 1150.53 |
| Pipeline Cost | 174.23 | | | | |
| Financial Charges on L/C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Administration Cost | 3.00 | 5.00 | 6.00 | 6.00 | 7.00 |
| NEPRA Fees | 6.37 | 0.39 | 0.43 | 0.46 | 0.50 |
| Total Fixed O&M Cost | 2270.61 | 1155.93 | 1156.96 | 1156.99 | 1158.03 |

Debt Services (Non-Escalable Component)

| | | | | | |
|------------------|----------------|----------------|----------------|----------------|----------------|
| Interest Charges | 127.95 | 115.94 | 84.20 | 51.97 | 19.98 |
| Total CPP | 2398.55 | 1271.87 | 1241.15 | 1208.96 | 1178.01 |

Calculation of Energy / Capacity Purchase Price

| | | | | | |
|---------------------------------------|---------|---------|---------|---------|---------|
| CPP-FOM charge (Rs./kW/Month) | 4345.21 | 2304.11 | 2248.47 | 2190.14 | 2134.08 |
| Total Capacity Charges (Million. Rs.) | 2398.55 | 1271.87 | 1241.15 | 1208.96 | 1178.01 |
| CPP Rs. / kWh | 5.9523 | 3.1563 | 3.0801 | 3.0002 | 2.9234 |
| EPP Rs. / kWh | 3.0566 | 3.0566 | 3.0566 | 3.0566 | 3.0566 |
| Total Average Tariff (Rs. / kWh) | 9.0090 | 6.2129 | 6.1367 | 6.0568 | 5.9800 |
| Us Cents / kWh | 10.8542 | 7.4855 | 7.3936 | 7.2974 | 7.2048 |

One US Dollar Rate = Rs. 83/-

CENTRAL POWER GENERATION COMPANY LIMITED

OPERATIONAL DATA AND CALCULATION OF ENERGY PURCHASE PRICE

50MW RENTAL POWER PLANT AT NAUDERO-II

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---------------|---------------|---------------|---------------|---------------|
| Installed Net Capacity | 50 | 50 | 50 | 50 | 50 |
| Guaranteed Available Electric Output @ 92% on GAS | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 |
| Heat Rate (BTU) | 9500 | 9500 | 9500 | 9500 | 9500 |
| Unavailable Capacity | 8.00% | 8.00% | 8.00% | 8.00% | 8.00% |
| Generation %age of Capacity | 92.00% | 92.00% | 92.00% | 92.00% | 92.00% |
| Fuel Price - Gas (Rs./MMBTU) | 321.75 | 321.75 | 321.75 | 321.75 | 321.75 |
| Calorific Value of Gas (BTU) | 900 | 900 | 900 | 900 | 900 |
| Net generation - Gas (GWh) | 402.960 | 402.960 | 402.960 | 402.960 | 402.960 |
| Fuel Cost / kWh Gas | 3.0566 | 3.0566 | 3.0566 | 3.0566 | 3.0566 |
| Fuel Cost Gas (Million. Rs.) | 1,231.70 | 1,231.70 | 1,231.70 | 1,231.70 | 1,231.70 |

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CENTRAL POWER GENERATION COMPANY LIMITED
CALCULATION OF CAPACITY PURCHASE PRICE
50MW Rental Power Plant, NAUDERO-II

| CALCULATION OF CAPACITY CHARGE | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|--|--------------|------------------|------------------|------------------|------------------|------------------|
| Guaranteed Available Electric Output @ 92% | | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 |
| Non-Escalable Component: | | | | | | |
| Fixed O&M Cost: | | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> |
| Rental Charges | | 2,087.01 | 1,150.53 | 1,150.53 | 1,150.53 | 1,150.53 |
| Pipeline Cost | | 174.23 | | | | |
| Financial Charges on duties of plant & equipment to be re-exported | | | | | | |
| Financial Charges on I/C | | | | | | |
| Administration Cost | | 3.00 | 5.00 | 6.00 | 6.00 | 7.00 |
| NEPRA Fees | | 6.37 | 0.39 | 0.43 | 0.46 | 0.50 |
| Insurance | | | | | | |
| Duties etc. | | | | | | |
| Total Fixed O&M Cost | | 2,270.61 | 1,155.93 | 1,156.96 | 1,156.99 | 1,158.03 |
| CPP-FOM charge (Rs./kW/Month) | | 4,113.417 | 2,094.069 | 2,095.938 | 2,096.000 | 2,097.878 |
| Return on Equity (Mln. Rs.) | | - | - | - | - | - |
| Return on Assets (Mln. Rs.) | | - | - | - | - | - |
| CPP-ROE charge (Rs./kW/Month) | | - | - | - | - | - |
| Total CPP-Non-Escalable (Rs./kW/Month) | | 4,113.417 | 2,094.069 | 2,095.938 | 2,096.000 | 2,097.878 |
| Escalable Component | | | | | | |
| Debt Service: | | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> | <u>Mln. Rs.</u> |
| Cost of Working Capital Financing | | 0.00 | 0.00 | 0.30 | 0.00 | 0.00 |
| Interest Charge | | 128 | 116 | 84 | 52 | 20 |
| Principal Repayment | | 0 | 0 | 0 | 0 | 0 |
| Total Debt Servicing | | 127.95 | 115.94 | 84.20 | 51.97 | 19.98 |
| Total CPP-Escalable (Rs./kW/Month) | | 231.7896 | 210.0395 | 152.5287 | 94.1447 | 36.1973 |
| Total CPP (Rs./kW/Month) | | 4,345.21 | 2,304.11 | 2,248.47 | 2,190.14 | 2,134.08 |
| Less: Other Revenue | Mln. Rs. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Rs./kW/Month | - | - | - | - | - |
| Net Total CPP (Rs./kW/Month) | | 4,345.21 | 2,304.11 | 2,248.47 | 2,190.14 | 2,134.08 |
| Total Capacity Charge (Mln. Rs.) | | 2398.55 | 1271.87 | 1241.15 | 1208.96 | 1178.01 |
| Generation plant factor | 92% | 402.96 | 402.96 | 402.96 | 402.96 | 402.96 |
| CPP Rs./kWh | | 5.9523 | 3.1563 | 3.0801 | 3.0002 | 2.9234 |
| EPP Rs./kWh | | 3.0566 | 3.0566 | 3.0566 | 3.0566 | 3.0566 |
| Total Average Tariff Rs. /kWh | | 9.0090 | 6.2129 | 6.1367 | 6.0568 | 5.9800 |
| US Cents / kWh | | 10.8542 | 7.4855 | 7.3936 | 7.2974 | 7.2048 |

CENTRAL POWER GENERATION COMPANY LIMITED SCHEDULE OF TARIFF

50MW RENTAL POWER PLANT AT NAUDERO-II

ENERGY PURCHASE PRICE

| Block # | EPP Element | Rupees Ref: Fuel | Ref: Price | Ref: Unit | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|-------------|----------------|---------------------|------------|-----------|--------|--------|--------|--------|--------|
| | | | | | | | | | |
| Auxl: Con: | | GAS | 321.75 | MMBTU | 3.0566 | 3.0566 | 3.0566 | 3.0566 | 3.0566 |
| Blk Ht: Rt: | | | | | | | | | |
| 9500 | | | | | | | | | |

CAPACITY PURCHASE PRICE

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Non-Escalable Component - CPP | | | | | |
| Fixed O & M Cost (Million.Rs.) | 2270.606 | 1155.926 | 1156.958 | 1156.992 | 1158.029 |
| Return on Equity | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Total Escalable Component - CPP | 2270.606 | 1155.926 | 1156.958 | 1156.992 | 1158.029 |
| Escalable Component - CPP | | | | | |
| Debt Service | 127.948 | 115.942 | 84.196 | 51.968 | 19.981 |
| Total Capacity Purchase Price(Rs./KW/Month) | 2398.554 | 1271.868 | 1241.154 | 1208.960 | 1178.010 |
| Avg. Capacity Purchase Price (Rs./kWh) | 5.9523 | 3.1563 | 3.0801 | 3.0002 | 2.9234 |
| Avg. Energy Purchase Price (Rs.kWh) | 3.0566 | 3.0566 | 3.0566 | 3.0566 | 3.0566 |
| Total Average Tariff (Rs./kWh) | 9.0090 | 6.2129 | 6.1367 | 6.0568 | 5.9800 |

THE CIVIL Repayment Plan of NATIONAL TRANSMISSION AND DESPATCH COMPANY (Rs in Millions)

Attachment - IV

For 50MW Rental Power Project, Naudero

| Loan Amount | 913,913,280 | Mark Up | | 14.0% | | |
|-------------------------|-------------|---|----------------|--------------------|--------------------|-------------|
| Term/ Years | 5.0 | No of Principal Payments (Quarterly) | | 16.0 | | |
| Grace Period (Years) | 1.0 | Amount of Principal Installment (Quarterly) | | 57,119,580 | | |
| Facility Effective Date | 30-Sep-09 | No of Days/Year | | 365.00 | | |
| S.No | Period | Installment | Number of Days | Markup | Principal | Balance |
| Grace Period - A | 31-Dec-09 | 32,249,871 | 92 | 32,249,871 | | 913,913,280 |
| Grace Period - B | 31-Mar-10 | 31,548,787 | 90 | 31,548,787 | | 913,913,280 |
| Grace Period - C | 30-Jun-10 | 31,899,329 | 91 | 31,899,329 | | 913,913,280 |
| Grace Period - D | 30-Sep-10 | 32,249,871 | 92 | 32,249,871 | | 913,913,280 |
| 1 | 31-Dec-10 | 89,369,451 | 92 | 32,249,871 | 57,119,580 | 856,793,700 |
| 2 | 31-Mar-11 | 86,696,568 | 90 | 29,576,988 | 57,119,580 | 799,674,120 |
| 3 | 30-Jun-11 | 85,031,493 | 91 | 27,911,913 | 57,119,580 | 742,554,540 |
| 4 | 30-Sep-11 | 83,322,600 | 92 | 26,203,020 | 57,119,580 | 685,434,960 |
| 5 | 31-Dec-11 | 81,306,984 | 92 | 24,187,404 | 57,119,580 | 628,315,380 |
| 6 | 31-Mar-12 | 79,050,369 | 91 | 21,930,789 | 57,119,580 | 571,195,800 |
| 7 | 30-Jun-12 | 77,056,661 | 91 | 19,937,481 | 57,119,580 | 514,076,220 |
| 8 | 30-Sep-12 | 75,260,133 | 92 | 18,140,553 | 57,119,580 | 456,956,640 |
| 9 | 31-Dec-12 | 73,244,516 | 92 | 16,124,936 | 57,119,580 | 399,837,060 |
| 10 | 31-Mar-13 | 70,922,174 | 90 | 13,802,594 | 57,119,580 | 342,717,480 |
| 11 | 30-Jun-13 | 69,081,828 | 91 | 11,962,248 | 57,119,580 | 285,597,900 |
| 12 | 30-Sep-13 | 67,197,665 | 92 | 10,078,085 | 57,119,580 | 228,478,320 |
| 13 | 31-Dec-13 | 65,182,048 | 92 | 8,062,468 | 57,119,580 | 171,358,740 |
| 14 | 31-Mar-14 | 63,034,978 | 90 | 5,915,398 | 57,119,580 | 114,239,160 |
| 15 | 30-Jun-14 | 61,106,996 | 91 | 3,987,416 | 57,119,580 | 57,119,580 |
| 16 | 30-Sep-14 | 59,135,197 | 92 | 2,015,617 | 57,119,580 | 0 |
| Total | | 1,313,947,520 | | 400,034,240 | 913,913,280 | |

*22.0% is Markup Rate Used for Calculation of Purchase Price (20% + 2.0% Margin)

Actual Markup Rate will be 6 Month Kibor + 2.0% as detailed in the STFA